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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,451	02/09/2004	Siaw Teck Sang	ATOCM-0347	3612

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MILLEN, WHITE, ZELANO & BRANIGAN, P.C.  
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EXAMINER
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KRUER, KEVIN R

ART UNIT	PAPER NUMBER
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1794

MAIL DATE	DELIVERY MODE
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01/11/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/773,451	<b>Applicant(s)</b> SANG ET AL.	
	<b>Examiner</b> KEVIN R. KRUER	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on September 17, 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Specification*

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. ***Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading.*** If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-8 and 10-31 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim states no weight percentages for the blend of polymers (c1) and (c2) and for polyethylene (D). Specifically, the claim states "by weight of polyethylene (D)" and "of a blend of polymers (C1 and C2) but does not give a weight percentage.

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-8 and 10-31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no support in the original disclosure for a blend (A) comprising any amount of blend (C1) and (C2) and any amount of polyethylene (D). Specifically, the blend (C1) and (C2) must be present in amounts of at least 5% and polyethylene (D) can not comprise more than 95% of the blend.

***.Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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7. Claims 1, 2, 7, 10, 11, 12, 13, and 28-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmukler et al (US 4,430,135) in view of Tanaka et al (US 5,695,838).

Schmukler teaches an adhesive composition for bonding polyolefin substrates to polar substrates (abstract). The adhesive comprises a blend of (i) 0.1-40pbw of a polyethylene grafted with ethylenically unsaturated carboxylic acids and (ii) 99.9-60pbw of a mixture comprising 25-90wt% HDPE, and 75-10wt% of a polypropylene (claim 1). Said adhesive is used in packaging films (col 5, lines 25+) wherein the polyolefin layer of the packaging film is understood to read on the weldable layer of claim 31.

Schmukler is relied upon as above but does not teach that the graft copolymer may be replaced with a blend comprising (C1) and (C2). However, Tanaka teaches an adhesive composition comprising (a) 50-90pbw of a modified polypropylene comprising a graft consisting of unsaturated carboxylic acid or derivative thereof and (b) 10-50pbw of a modified polyolefin comprising a graft consisting of an unsaturated carboxylic acid or derivative thereof (abstract). The polyolefin may comprise a polyethylene (see examples) with a density of 0.86-0.93 (claim 1). The grafting ratio of the composition is 0.01-5wt%, which reads on the claimed content of claim 1. Furthermore, each component has a melt flow between 0.5-30g/10min (col 4, lines 5+). Said blend has excellent adhesion, heat resistance, gas barrier properties and shrink properties (col 5, lines 17+). Thus, it would have been obvious to the skilled artisan at the time the invention was made to utilize the blend of Tanaka in place of component (i) taught in

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Schmukler. The motivation for doing so would have been to increase the adhesion of the composition, the shrink properties, and the heat resistance.

Tanaka does not teach the polymers should be polymerized with a metallocene catalyst. However, it is generally known in the art that metallocene catalyst result in compositions with more uniform compositions and better properties. Therefore, it would have been obvious to the skilled artisan at the time the invention was made to polymerize the polymers taught in Tanaka with a metallocene catalyst in order to obtain a more uniform composition with improved properties.

Furthermore, the examiner takes the position that "co-grafted" is a method limitations that does not patentably distinguish the claimed invention from the prior art because there is no evidence of record that "co-grafting" results in a patentably different product. Specifically, the claimed composition and Tanaka both comprise blends of polymers which have been grafted.

Said blend reads on the composition when the LLDPE content is 0wt%. Alternatively, a HDPE with a density of about 0.94 (as taught by Schmukler at col 1, lines 65+) is understood to read on a polyethylene with a density of 0.935. Alternatively, the courts have held that a claim is prima facie obvious when the claimed range and the prior art range do not overlap but are close enough that the skilled artisan would have expected them to have the same properties. Thus, it would have been obvious to the skilled artisan to utilize a polyethylene with a density of 0.935 rather than 0.94 as the polyethylene taught in Schmukler because the skilled artisan would expect said polyethylenes to have the same properties.

8. Claims 1-7, 10-17, 21-24 and 26-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bothe et al (US 5,096,630) in view of Schmukler et al (US 4,430,135) and Tanaka et al (US 5,695,838).

Bothe teaches a multilayer structure comprising a polyethylene protective layer (col 5, lines 57+), a metallized layer, a polyolefin adhesive layer, an isotactic polypropylene core layer (col 2, lines 54+) with a thickness of 4-40um (col 4, lines 55+), and an outer heat sealable layer. The propylene core layer is biaxially oriented (col 2, lines 4+) and has a thickness of 4-40um (col 2, lines 1+). The metallic foil may comprise Al, Ag, or Zn and has a thickness of 20-600nm (col 5, lines 18+). The heat sealable surface layer (col 3, lines 45+) may comprise ethylene/propylene or ethylene/propylene/butylene and has a thickness of 0.2-3um (col 4, lines 55+).

Bothe is relied upon as above but does not teach the adhesive layers between the foil and the polypropylene and between the polyester and polypropylene may comprise the claimed tie layer composition. However, Schmukler teaches an adhesive composition for bonding polyolefin substrates to polar substrates (abstract). The adhesive comprises a blend of (i) 0.1-40pbw of a polyethylene grafted with ethylenically unsaturated carboxylic acids and (ii) 99.9-60pbw of a mixture comprising 25-90wt% HDPE, and 75-10wt% of a polypropylene (claim 1). Said adhesive is used in packaging films (col 5, lines 25+). It would have been obvious to the skilled artisan to utilize the adhesive taught in Schmukler as the adhesive layers of Bothe's laminate because said adhesive has excellent adhesion between polyolefin and polar layers.

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Schmukler is relied upon as above but does not teach that the graft copolymer may be replaced with a blend comprising (C1) and (C2). However, Tanaka teaches an adhesive composition comprising 50-90parts by weight of a modified polypropylene comprising a graft consisting of unsaturated carboxylic acid or derivative thereof and (b) 10-50pbw of a modified polyolefin comprising a graft consisting of an unsaturated carboxylic acid or derivative thereof (abstract). The polyolefin may comprise a metallocene catalyzed polyethylene (see examples) with a density of 0.86-0.93 (claim 1). The grafting ratio is 0.01-5wt%, which reads on the claimed content of claim 1. Each component has a melt flow between 0.5-30g/10min (col 4, lines 5+). Said blend has excellent adhesion, heat resistance, gas barrier properties and shrink properties (col 5, lines 17+). Thus, it would have been obvious to the skilled artisan at the time the invention was made to utilize the blend of Tanaka in place of component (i) taught in Schmukler. The motivation for doing so would have been to increase the adhesion of the composition, the shrink properties, and the heat resistance.

Tanaka does not teach the polymers should be polymerized with a metallocene catalyst. However, it is generally known in the art that metallocene catalyst result in compositions with more uniform compositions and better properties. Therefore, it would have been obvious to the skilled artisan at the time the invention was made to polymerize the polymers taught in Tanaka with a metallocene catalyst in order to obtain a more uniform composition with improved properties.

Furthermore, the examiner takes the position that "co-grafting" is a method limitations that does not patentably distinguish the claimed invention from the prior art



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because there is no evidence of record that "co-grafting" results in a patentably different product. Specifically, the claimed composition and Tanaka both comprise blends of polymers which have been grafted.

Said blend reads on the composition when the LLDPE content is 0wt%.

Alternatively, a HDPE with a density of about 0.94 (as taught by Schmukler at col 1, lines 65+) is understood to read on a polyethylene with a density of 0.935. Alternatively, the courts have held that a claim is prima facie obvious when the claimed range and the prior art range do not overlap but are close enough that the skilled artisan would have expected them to have the same properties. Thus, it would have been obvious to the skilled artisan to utilize a polyethylene with a density of 0.935 rather than 0.94 as the polyethylene taught in Schmukler because the skilled artisan would expect said polyethylenes to have the same properties.

9. Claims 8 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bothe et al (US 5,096,630) in view of Schmukler et al (US 4,430,135) and Tanaka et al (US 5,695,838), as applied to claims above, and further in view of Moore et al (US 6,165,160)

Bothe teaches the use of polyethylene protective films over the metallized film but does not teach a printed biaxially polypropylene film may be utilized in place of the PE protective film. However, Moore teaches a metallized packaging film comprising a printed biaxially oriented polypropylene protective film is adhered thereto (col 2, lines 36+). Thus, it would have been obvious to the skilled artisan to adhere a printed biaxially oriented polypropylene film to the metallized film taught in Bothe. The

motivation for doing so would have been said layers are functionally equivalent to the polyethylene taught in Bothe.

### ***Response to Arguments***

Applicant's arguments filed 9/17/2009 have been fully considered but they are not persuasive. Applicant's arguments with regards to the newly claimed density of component (D) is addressed above in the new grounds of rejection.

Applicant argues there is no support cited for the notice taken that it is generally known in the art that metallocene catalysts result in compositions with more uniform compositions and better properties. In support of said position, applicant's attention is directed to US 5,824,746 (col 2, lines 10+).

Applicant further argues a co-grafted blend of polypropylene and polyethylene would be expected to be different from separately grafted polypropylene and polyethylene with regards to adhesion characteristics. Said argument is noted but is not persuasive because it is unsupported by evidence; applicant is reminded that counsel's argument cannot take the place of evidence.

For the reasons noted above, the rejections are maintained.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN R. KRUEER whose telephone number is (571)272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin R Kruer/  
Primary Examiner, Art Unit 1794